

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Nikolay Ushir Examiner #: 71025 Date: 3/20/02
 Art Unit: 1773 Phone Number 305-2174 Serial Number: 01971896
 Mail-Box and Bldg/Room Location: CP3 11/01 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Laminate

Inventors (please provide full names): Naoto Ikegawa; Maoyuki Kondo; Kimuki Nakata

Earliest Priority Filing Date: 6/6/00

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

① a laminate comprising a metal layer formed on the surface of an insulating substrate, wherein the substrate is poly(phthalamide*) and contains 20-150 parts by weight of a fibrous filler, wherein the fibrous filler is a titanate, borate or wollastonite having an average length between 20-150 ~~mm~~ μm and an average diameter between 1-5 μm .

② the laminate of claim 1 where the substrate is nylon 6, nylon 66, poly(phthalamide), polyphenylene sulfide, polyethylene terephthalate, poly(ether ketone), poly(ether amide) or liquid crystal ^{speed} poly(ester), the fibrous filler is wollastonite* and the substrate further contains a 1-20 μm ^{as in} ~~unshaped~~ ^{powdery} filler ^(amorphous) ~~lie~~ ^{kaolin} ~~clay~~.

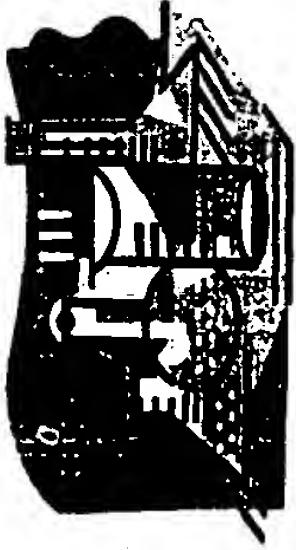
③ Laminate #2, but where the powdery filler is spherical.

④ Laminate as in #3 where the fibrous filler is Aluminum borate and the spherical ~~filler~~ filler is silica.

* 9 * * * -> See attached.

STAFF USE ONLY**Type of Search****Vendors and cost where applicable**

Searcher: K. Teiller NA Sequence (#) STN
 Searcher Phone #: _____ AA Sequence (#) _____ Dialog _____
 Searcher Location: _____ Structure (#) _____ Questel/Orbit _____
 Date Searcher Picked Up: 3/22/02 Bibliographic ☒ Dr. Link _____
 Date Completed: 20 Litigation _____ Lexis/Nexis _____
 Searcher Prep & Review Time: _____ Fulltext _____ Sequence Systems _____
 Clerical Prep Time: 98 Patent Family _____ WWW/Internet _____
 Online Time: _____ Other _____ Other (specify) _____



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Search Results Feedback Form

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact the searcher whose name is circled below.

Kathleen Fuller 308-4290 Eric Linnell 308-4143 John Calve 308-4139

All searchers are located in the library in CP3/4 3D62

=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:41:07 ON 22 MAR 2002

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FILE COVERS 1907 - 22 Mar 2002 VOL 136 ISS 13
FILE LAST UPDATED: 21 Mar 2002 (20020321/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> D QUE

L5	7254	SEA	FILE=REGISTRY	ABB=ON	124-09-4/CRN	
L7	21123	SEA	FILE=REGISTRY	ABB=ON	100-21-0/CRN	
L8	597	SEA	FILE=REGISTRY	ABB=ON	L5 AND L7	
L9	5	SEA	FILE=REGISTRY	ABB=ON	L8 AND 2/NC	
L18	3	SEA	FILE=REGISTRY	ABB=ON	WOLLASTONITE/CN	
L25	8692	SEA	FILE=HCAPLUS	ABB=ON	L18 OR WOLLASTONITE OR CASIO3	
L27	1	SEA	FILE=REGISTRY	ABB=ON	KAOLIN/CN	
L28	79	SEA	FILE=HCAPLUS	ABB=ON	L27	
L29	35375	SEA	FILE=HCAPLUS	ABB=ON	(L28 OR KAOLIN/BI)	
L31	17963	SEA	FILE=HCAPLUS	ABB=ON	LAMINAT?(S)METAL?	
L73	199	SEA	FILE=HCAPLUS	ABB=ON	L9	
L74	6172	SEA	FILE=HCAPLUS	ABB=ON	L73 OR ?PHTHALAMID?	
L76	0	SEA	FILE=HCAPLUS	ABB=ON	L74 AND L31 AND L25 AND L29	
L77	0	SEA	FILE=HCAPLUS	ABB=ON	L74 AND L31 AND L25 AND CLAY#	
L78	0	SEA	FILE=HCAPLUS	ABB=ON	L76 OR L77	

=>

*no references with
polyphthalamide and wollastonite
+ (Kaolin or clay) for
metal laminates*

=> FILE REGISTRY

FILE 'REGISTRY' ENTERED AT 16:08:25 ON 22 MAR 2002
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STRUCTURE FILE UPDATES: 20 MAR 2002 HIGHEST RN 402467-99-6
DICTIONARY FILE UPDATES: 20 MAR 2002 HIGHEST RN 402467-99-6

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the H/Z/CA/CAplus files between
12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches
during this period, either directly appended to a CAS Registry Number
or by qualifying an L-number with /P, may have yielded incomplete results.
As of 1/23/02, the situation has been resolved. Also, note that searches
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files
incorporating CAS Registry Numbers with the P indicator between 12/27/01
and 1/23/02, are encouraged to re-run these strategies. Contact the
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,
worldwide, or send an e-mail to help@cas.org for further assistance or to
receive a credit for any duplicate searches.

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 16:08:32 ON 22 MAR 2002
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FILE COVERS 1907 - 22 Mar 2002 VOL 136 ISS 13
FILE LAST UPDATED: 21 Mar 2002 (20020321/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

CAS roles have been modified effective December 16, 2001. Please

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check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> D QUE L36

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L12      9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
L13      6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
L18      3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
L22      53533 SEA FILE=HCAPLUS ABB=ON L13
L23      59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
L25      8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
L27      1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
L28      79 SEA FILE=HCAPLUS ABB=ON L27
L29      35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)
L31      17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L32      25 SEA FILE=HCAPLUS ABB=ON L25 AND L31
L34      0 SEA FILE=HCAPLUS ABB=ON L29 AND L32 AND L23
L35      0 SEA FILE=HCAPLUS ABB=ON L31 AND L23 AND L25 AND CLAY#
L36      0 SEA FILE=HCAPLUS ABB=ON L34 OR L35
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=> D QUE L61

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L2      14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR
9003-18-3/BI)
L10      6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
L12      9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
L13      6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
L14      1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN
L15      1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN
L18      3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
L19      13 SEA FILE=REGISTRY ABB=ON L2 NOT L18
L20      2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)
L22      53533 SEA FILE=HCAPLUS ABB=ON L13
L23      59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
L25      8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
L27      1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
L28      79 SEA FILE=HCAPLUS ABB=ON L27
L29      35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)
L31      17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L37      4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR
PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA
LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR
POLYESTER? OR PEEK)
L38      2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN
L39      549 SEA FILE=HCAPLUS ABB=ON L38
L40      640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR ( L39 OR
ALUMINUM BORATE/BI)
L41      384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)
L43      1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
L44      232851 SEA FILE=HCAPLUS ABB=ON L43
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L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR
SILICA OR (L44 OR SILICON DIOXIDE/BI))
L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?
L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?
L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48
L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)
L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A)FILLER?
L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
L59 232851 SEA FILE=HCAPLUS ABB=ON L58
L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR
SILICA OR (L59 OR SILICON DIOXIDE/BI))
L61 16 SEA FILE=HCAPLUS ABB=ON L49 OR L60

=> FILE WPIX

FILE 'WPIX' ENTERED AT 16:09:05 ON 22 MAR 2002
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FILE LAST UPDATED: 21 MAR 2002 <20020321/UP>
MOST RECENT DERWENT UPDATE 200219 <200219/DW>
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>>> SDI'S MAY BE RUN ON EVERY UPDATE OR MONTHLY AS OF JUNE 2001.
(EVERY UPDATE IS THE DEFAULT). FOR PRICING INFORMATION
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>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
SEE <http://www.derwent.com/dwpi/updates/dwpicov/index.html> <<<

=> D QUE L65

L2 14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR
9003-18-3/BI)
L10 6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
L12 9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
L13 6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
L14 1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN
L15 1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN
L18 3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
L19 13 SEA FILE=REGISTRY ABB=ON L2 NOT L18
L20 2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)
L22 53533 SEA FILE=HCAPLUS ABB=ON L13
L23 59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
L25 8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
L27 1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
L28 79 SEA FILE=HCAPLUS ABB=ON L27
L29 35375 SEA FILE=HCAPLUS ABB=ON (L28 OR KAOLIN/BI)
L31 17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L32 25 SEA FILE=HCAPLUS ABB=ON L25 AND L31
L34 0 SEA FILE=HCAPLUS ABB=ON L29 AND L32 AND L23

L35 0 SEA FILE=HCAPLUS ABB=ON L31 AND L23 AND L25 AND CLAY#
 L37 4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR
 PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA
 LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR
 POLYESTER? OR PEEK)
 L38 2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN
 L39 549 SEA FILE=HCAPLUS ABB=ON L38
 L40 640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR (L39 OR
 ALUMINUM BORATE/BI)
 L41 384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)
 L43 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
 L44 232851 SEA FILE=HCAPLUS ABB=ON L43
 L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR
 SILICA OR (L44 OR SILICON DIOXIDE/BI))
 L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?
 L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?
 L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48
 L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)
 L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A)FILLER?
 L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
 L59 232851 SEA FILE=HCAPLUS ABB=ON L58
 L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR
 SILICA OR (L59 OR SILICON DIOXIDE/BI))
 L62 0 SEA FILE=WPIX ABB=ON L34 OR L35
 L63 7 SEA FILE=WPIX ABB=ON L49 OR L60
 L64 4 SEA FILE=WPIX ABB=ON L63 AND (METAL?(3A)LAYER?)
 L65 4 SEA FILE=WPIX ABB=ON L62 OR L64

=> FILE COMPENDEX

FILE 'COMPENDEX' ENTERED AT 16:09:28 ON 22 MAR 2002
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FILE LAST UPDATED: 19 MAR 2002 <20020319/UP>
 FILE COVERS 1970 TO DATE.

=> D QUE L67

L2 14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR
 12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B
 I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR
 32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR
 9003-18-3/BI)
 L10 6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
 L12 9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
 L13 6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
 L14 1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN
 L15 1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN
 L18 3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
 L19 13 SEA FILE=REGISTRY ABB=ON L2 NOT L18
 L20 2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)
 L22 53533 SEA FILE=HCAPLUS ABB=ON L13
 L23 59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
 L25 8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
 L27 1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
 L28 79 SEA FILE=HCAPLUS ABB=ON L27
 L29 35375 SEA FILE=HCAPLUS ABB=ON (L28 OR KAOLIN/BI)

L31 17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L37 4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR
PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA
LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR
POLYESTER? OR PEEK)
L38 2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN
L39 549 SEA FILE=HCAPLUS ABB=ON L38
L40 640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR (L39 OR
ALUMINUM BORATE/BI)
L41 384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)
L43 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
L44 232851 SEA FILE=HCAPLUS ABB=ON L43
L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR
SILICA OR (L44 OR SILICON DIOXIDE/BI))
L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?
L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?
L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48
L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)
L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A)FILLER?
L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
L59 232851 SEA FILE=HCAPLUS ABB=ON L58
L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR
SILICA OR (L59 OR SILICON DIOXIDE/BI))
L67 0 SEA FILE=COMPENDEX ABB=ON L49 OR L60

=> FILE INSPEC

FILE 'INSPEC' ENTERED AT 16:09:52 ON 22 MAR 2002

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FILE LAST UPDATED: 18 MAR 2002 <20020318/UP>
FILE COVERS 1969 TO DATE.

=> D QUE L71

L2 14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR
9003-18-3/BI)
L10 6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
L12 9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
L13 6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
L14 1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN
L15 1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN
L18 3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
L19 13 SEA FILE=REGISTRY ABB=ON L2 NOT L18
L20 2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)
L22 53533 SEA FILE=HCAPLUS ABB=ON L13
L23 59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
L25 8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
L27 1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
L28 79 SEA FILE=HCAPLUS ABB=ON L27
L29 35375 SEA FILE=HCAPLUS ABB=ON (L28 OR KAOLIN/BI)
L31 17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L32 25 SEA FILE=HCAPLUS ABB=ON L25 AND L31
L34 0 SEA FILE=HCAPLUS ABB=ON L29 AND L32 AND L23

L35 0 SEA FILE=HCAPLUS ABB=ON L31 AND L23 AND L25 AND CLAY#
 L37 4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR
 PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA
 LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR
 POLYESTER? OR PEEK)
 L38 2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN
 L39 549 SEA FILE=HCAPLUS ABB=ON L38
 L40 640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR (L39 OR
 ALUMINUM BORATE/BI)
 L41 384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)
 L43 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
 L44 232851 SEA FILE=HCAPLUS ABB=ON L43
 L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR
 SILICA OR (L44 OR SILICON DIOXIDE/BI))
 L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?
 L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?
 L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48
 L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)
 L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A)FILLER?
 L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
 L59 232851 SEA FILE=HCAPLUS ABB=ON L58
 L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR
 SILICA OR (L59 OR SILICON DIOXIDE/BI))
 L69 0 SEA FILE=INSPEC ABB=ON L34 OR L35
 L70 0 SEA FILE=INSPEC ABB=ON L49 OR L60
 L71 0 SEA FILE=INSPEC ABB=ON L69 OR L70

=> DUP REM L61 L65

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L72 20 DUP REM L61 L65 (0 DUPLICATES REMOVED)

=> D L72 ALL 1-20 HITSTR

L72 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 2002:15845 HCAPLUS
 DN 136:86860
 TI Fabrication of antireflective film by forming a corroded metal layer
 IN Iwama, Isao; Omo, Noriaki
 PA Nissha Printing Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B32B015-08
 ICS B32B015-08; B29C045-14; B32B007-02; G02B001-11; B29K101-00;
 B29L007-00; B29L009-00; B29L011-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 56

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002001867	A2	20020108	JP 2000-192062	20000627
AB	Title antireflective film is fabricated by laminating on (A) a transparent substrate (e.g., an acrylic resin), (B) an adhesive layer (acrylic), (C) corroded metal layer (aluminum), (D) printed layer (acrylic gravure), (E) releasing layer (UV-cured epoxy), (F) low reflective layer (alternate between silica and titania), and (G) antistaining layer (fluorine-contg. silane). Thus, layers (E)-(B) were sequentially formed on a PET film and transferred to a transparent substrate in an injection-mold, and finally layers (f) and (G) were formed on top of layer (E).				
ST	corroded aluminum deposition film antireflective laminate				
IT	Epoxy resins, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (UV-cured; as releasing layer for antireflective laminate)				
IT	Coating materials				
	(antistaining; for laminated antireflective film)				
IT	Laminated plastics, uses				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (as antireflective film)				
IT	Acrylic polymers, uses				
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (as transparent substrate for antireflective laminate)				
IT	Antireflective films				
	(contg. corroded metal layer)				
IT	Silanes				
	RL: TEM (Technical or engineered material use); USES (Uses) (fluoro; as antistaining coating material for laminated antireflective film)				
IT	Polyesters , miscellaneous				
	RL: MSC (Miscellaneous) (for transfer-molding of antireflective film)				
IT	Molding of plastics and rubbers				
	(transfer; in prepn. of antireflective laminate)				
IT	Vapor deposition process				
	(vacuum; of metal layer for antireflective laminate)				
IT	13463-67-7, Titania , uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (alternate with silica as low-reflective layer for antireflective laminate)				
IT	7631-86-9, Silica , uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (alternate with titania as low-reflective layer for antireflective laminate)				
IT	7429-90-5, Aluminum, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (corroded vacuum-deposited metal layer for antireflective laminate based on)				
IT	25038-59-9, PET (polyester) , miscellaneous				
	RL: MSC (Miscellaneous) (for transfer-molding of antireflective film)				
IT	7631-86-9, Silica , uses				

RL: TEM (Technical or engineered material use); USES (Uses)
(alternate with **titania** as low-reflective layer for
antireflective laminate)

RN 7631-86-9 HCAPLUS

CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



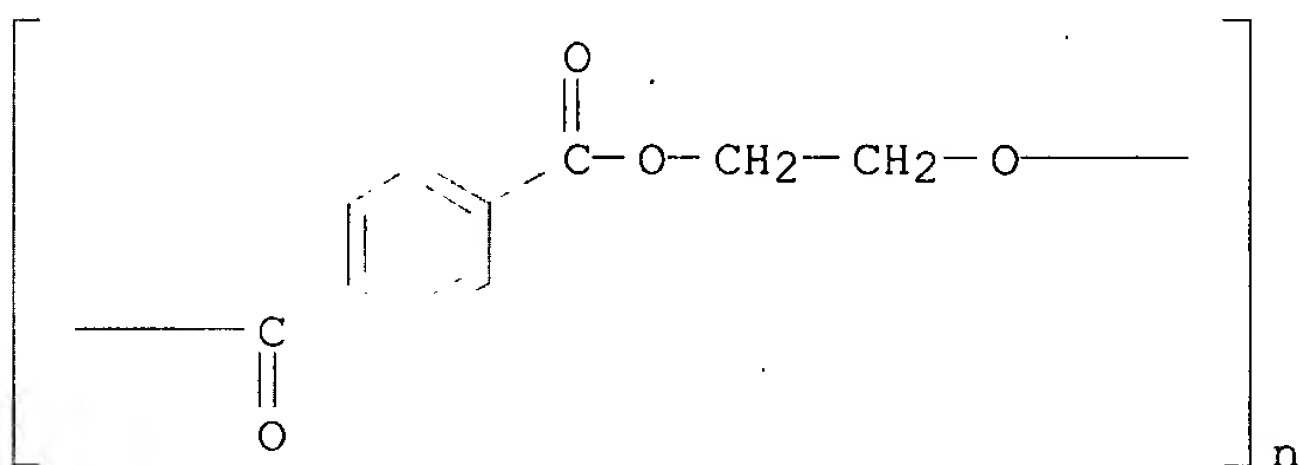
IT 25038-59-9, PET (polyester), miscellaneous

RL: MSC (Miscellaneous)

(for transfer-molding of antireflective film)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:713755 HCAPLUS

DN 135:274111

TI Polybutadiene- and polyisoprene based **thermosetting** compositions
as circuit board substrates

IN Landi, Vincent R.

PA World Properties, Inc., USA

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM H05K001-03

CC 39-9 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2001072095	A2	20010927	WO 2001-US40338	20010321
	WO 2001072095	A3	20020131		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2000-531947 A 20000321

AB The flame retardant compns., curable at low temp. and having improved

stability in dielec. const. and mech. properties with thermal aging, comprise: (A) a **thermosetting** polybutadiene or polyisoprene resin, (B) up to 20% (based on total resins) a ethylene propylene rubber with mol. wt. <50,000, (C) 20-60 phr flame retardant, (D) up to 50 vol% fabric, (E) up to 65 vol% filler and (E) effective amt. of peroxide curing agent, and a circuit board comprises a substrate from title compn. and a conductive **metal** layer, e.g., copper layer, **laminated** to the substrate.

- ST polybutadiene polyisoprene flame retardant **thermosetting** compn; ethylene propylene rubber low temp curable compn; copper conductive layer circuit board
- IT Styrene-butadiene rubber, properties
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(block, Kraton D-KX 410CS; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Styrene-butadiene rubber, properties
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(block, diblock, Kraton D 1118X; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Styrene-butadiene rubber, properties
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(block, triblock, Vector 8508D; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT EPDM rubber
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(dicyclopentadiene-ethylene-propene, Trilene 54; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Glass **fibers**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**filler**; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Butadiene rubber, properties
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(of 1,2-configuration, B 3000; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Printed circuit boards
(using polybutadiene- and polyisoprene based **thermosetting** compns. as substrate)
- IT Polymer blends
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(using polybutadiene- and polyisoprene based **thermosetting** compns. as substrate)
- IT 9003-17-2
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(butadiene rubber, of 1,2-configuration, B 3000; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board

- substrates)
- IT 7440-50-8, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(conductive layer; polybutadiene- and polyisoprene based
thermosetting compns. as circuit board substrates)
- IT 7631-86-9, CE 44I, uses
RL: MOA (Modifier or additive use); USES (Uses)
(filler, CE 44I; polybutadiene- and polyisoprene based
thermosetting compns. as circuit board substrates)
- IT 409-21-2, Silicon carbide, uses 1304-56-9, Beryllia, uses 1309-48-4,
Magnesia, uses 1344-28-1, Alumina, uses 10043-11-5, Boron nitride,
uses 12047-27-7, Barium titanate, uses 12060-59-2, Strontium titanate
13463-67-7, Titanium dioxide, uses 24304-00-5, Aluminum nitride
RL: MOA (Modifier or additive use); USES (Uses)
(filler; polybutadiene- and polyisoprene based **thermosetting**
compns. as circuit board substrates)
- IT 32588-76-4, BT 93WFG
RL: MOA (Modifier or additive use); USES (Uses)
(flame retardant, BT 93WFG; polybutadiene- and polyisoprene based
thermosetting compns. as circuit board substrates)
- IT 25034-71-3, Dicyclopentadiene-ethylene-propenecopolymer
RL: PEP (Physical, engineering or chemical process); POF (Polymer in
formulation); PRP (Properties); TEM (Technical or engineered material
use); PROC (Process); USES (Uses)
(rubber; polybutadiene- and polyisoprene based **thermosetting**
compns. as circuit board substrates)
- IT 106107-54-4
RL: PEP (Physical, engineering or chemical process); POF (Polymer in
formulation); PRP (Properties); TEM (Technical or engineered material
use); PROC (Process); USES (Uses)
(styrene-butadiene rubber, block, Kraton D-KX 410CS; polybutadiene- and
polyisoprene based **thermosetting** compns. as circuit board
substrates)
- IT 106107-54-4
RL: PEP (Physical, engineering or chemical process); POF (Polymer in
formulation); PRP (Properties); TEM (Technical or engineered material
use); PROC (Process); USES (Uses)
(styrene-butadiene rubber, block, diblock, Kraton D 1118X;
polybutadiene- and polyisoprene based **thermosetting** compns.
as circuit board substrates)
- IT 106107-54-4
RL: PEP (Physical, engineering or chemical process); POF (Polymer in
formulation); PRP (Properties); TEM (Technical or engineered material
use); PROC (Process); USES (Uses)
(styrene-butadiene rubber, block, triblock, Vector 8508D;
polybutadiene- and polyisoprene based **thermosetting** compns.
as circuit board substrates)
- IT 7631-86-9, CE 44I, uses
RL: MOA (Modifier or additive use); USES (Uses)
(filler, CE 44I; polybutadiene- and polyisoprene based
thermosetting compns. as circuit board substrates)
- RN 7631-86-9 HCAPLUS
CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



AN 2001:805245 HCAPLUS
 DN 135:345952
 TI Peel-apart **metal** compound thin film layer **laminate**
 used for transfer of **metal** compound layer onto other material or
 forming foil or powder
 IN Taniuchi, Takahiro; Inoue, Masahiro
 PA Oike Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B32B009-00
 ICS B44C001-17
 CC 42-11 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 57, 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001310411	A2	20011106	JP 2000-131982	20000501

AB The **laminate** comprises, successively from the bottom, a
substrate film (S), a **metal** thin film **layer**
 (M), and a **metal** compd. thin film **layer** (C) of 5-300
 .mu.m thickness; wherein adhesion between S and M is stronger than that
 between M and C. The laminate is free from an org. release layer. Thus,
 a **polyethylene terephthalate** film laminated with a Au
 layer and a Si oxide layer was applied on an acrylic polymer sheet via an
 urethane-acrylic adhesive and hot pressed to bond only the Si oxide layer,
 and the Au/**PET** laminate was peeled off. The transferred Si oxide
 layer was free from org. components or pollutants.

ST **metal** compd. thin film **laminate** transfer; silicon oxide
 thin layer transfer; indium tin oxide thin layer transfer; oxide metal
 thin layer transfer material; nitride metal thin layer transfer material;
 oxynitride metal thin layer transfer material; foil **metal** compd
 manuf transfer peelable **laminate**; powder **metal** compd
 manuf transfer peelable **laminate**; peel apart **metal**
 compd **laminate** transfer

IT **Metals**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (in **laminate**; peel-apart **metal** compd. thin film
 layer **laminate** used for transfer of **metal** compd.
 layer onto other material or forming foil or powder)

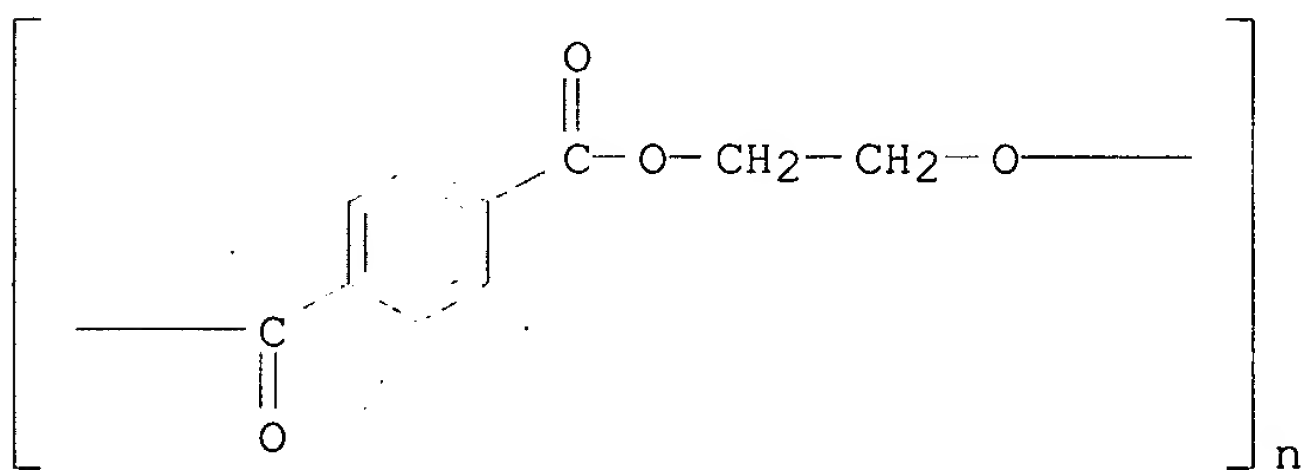
IT Foils
 Powders
 (**metal** compd., manuf.; peel-apart **metal** compd. thin
 film layer **laminate** used for transfer of **metal**
 compd. layer onto other material or forming foil or powder)

IT **Laminated** plastic films
 Transfers
 (peel-apart **metal** compd. thin film layer **laminate**
 used for transfer of **metal** compd. layer onto other material
 or forming foil or powder)

IT **Polyesters**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**substrate** in **laminate**; peel-apart **metal**
 compd. thin film **layer** **laminate** used for transfer
 of **metal** compd. **layer** onto other material or
 forming foil or powder)

IT Nitrides
 Oxides (inorganic), uses
 Oxynitrides

- RL: TEM (Technical or engineered material use); USES (Uses)
 (thin film; peel-apart **metal** compd. thin film layer
laminate used for transfer of **metal** compd. layer onto
 other material or forming foil or powder)
- IT 25038-59-9, Polyethylene terephthalate, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate in **laminate**; peel-apart **metal**
 compd. thin film layer **laminate** used for transfer
 of **metal** compd. layer onto other material or
 forming foil or powder)
- IT 7440-06-4, Platinum, uses 7440-22-4, Silver, uses 7440-57-5, Gold,
 uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thin film layer, in **laminate**; peel-apart **metal**
 compd. thin film layer **laminate** used for transfer of
metal compd. layer onto other material or forming foil or
 powder)
- IT 1312-43-2, Indium oxide 1332-29-2, Tin oxide 1344-28-1, Aluminum
 oxide, uses 7631-86-9, Silicon oxide, uses 11105-01-4, Silicon
 oxynitride 12033-89-5, Silicon nitride, uses 12633-97-5, Aluminum
 oxynitride 13463-67-7, Titanium oxide, uses 24304-00-5,
 Aluminum nitride 25583-20-4, Titanium nitride 25617-98-5,
 Indium nitride 37271-26-4, Titanium oxynitride 50926-11-9,
 Indium tin oxide 55574-97-5, Tin nitride 116517-57-8, Indium
 oxynitride 130988-77-1, Tin oxynitride
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thin film; peel-apart **metal** compd. thin film layer
laminate used for transfer of **metal** compd. layer onto
 other material or forming foil or powder)
- IT 25038-59-9, Polyethylene terephthalate, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate in **laminate**; peel-apart **metal**
 compd. thin film layer **laminate** used for transfer
 of **metal** compd. layer onto other material or
 forming foil or powder)
- RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX
 NAME)



- IT 7631-86-9, Silicon oxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thin film; peel-apart **metal** compd. thin film layer
laminate used for transfer of **metal** compd. layer onto
 other material or forming foil or powder)
- RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:705075 HCAPLUS

DN 135:264333

TI Antireflective conductive transparent laminates and image display apparatus

IN Yamada, Tsukasa; Matsufuji, Akihiro

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B001-11

ICS B32B007-02; B32B027-00; G02B001-10; G02F001-1335; H01B005-14; H04N005-72

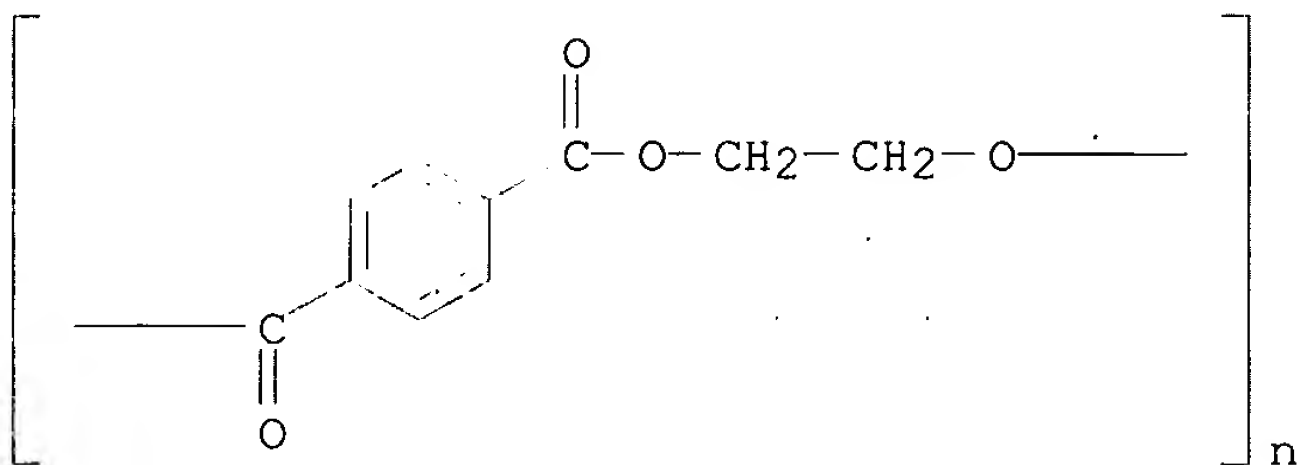
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001264505	A2	20010926	JP 2000-71199	20000314
AB	The laminates , suitable for use on image display screens, comprise: a transparent plastic film substrate ; a hard coating layer contg. Al ₂ O ₃ , SiO₂ , TiO ₂ and ZrO ₂ ; a transparent conductive plastic layer contg. fine metal particles; an antireflective multilayer; and a transparent anti-contamination layer.				
ST	antireflective conductive transparent laminate image display				
IT	Antireflective films Electromagnetic wave Laminated materials Optical dispersion Optical imaging devices Polymerization Refractive index (antireflective conductive transparent laminates and image display app.)				
IT	Polyesters , uses RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display app.)				
IT	1314-23-4, Zirconium dioxide, uses 1344-28-1, Alumina, uses 7440-22-4, Silver, uses 7631-86-9 , Silica , uses 13463-67-7, Titanium oxide (TiO ₂), uses 25038-59-9 , Polyethyleneterephthalate, uses 29570-58-9, DPHA RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display app.)				
IT	7631-86-9 , Silica , uses 25038-59-9 , Polyethyleneterephthalate, uses RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display app.)				
RN	7631-86-9 HCAPLUS				
CN	Silica (7CI, 8CI, 9CI) (CA INDEX NAME)				



RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 2001:707518 HCAPLUS
 DN 135:264344
 TI Antireflective conductive transparent laminates and image display apparatus
 IN Yamada, Tsukasa; Matsutou, Akihiro; Hatakeyama, Kenichiro
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G02B001-11
 ICS B32B007-02; G02B001-10; G02F001-1335; H01B005-14; H01J029-89; H04N005-72
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

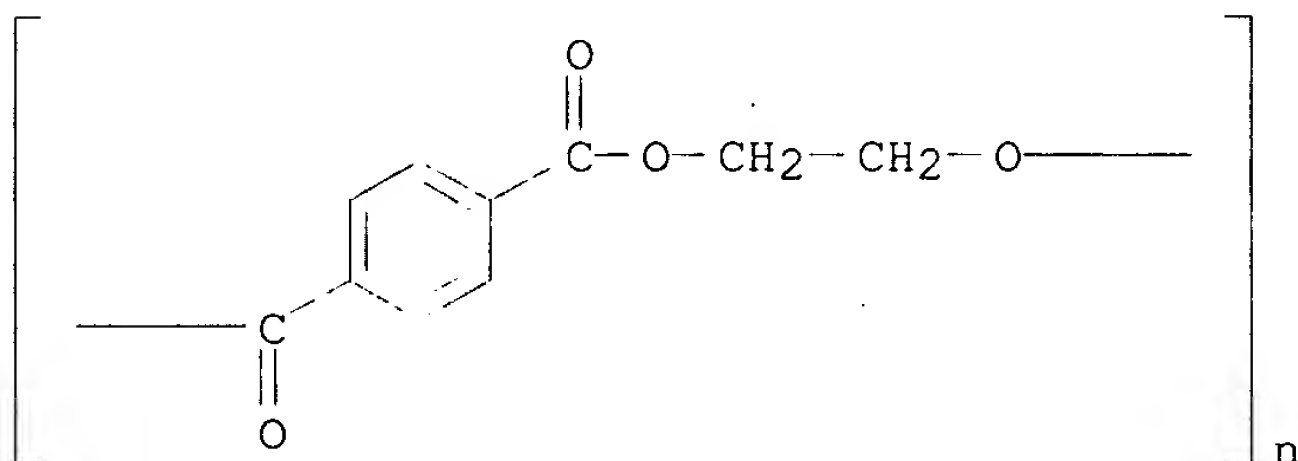
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001264503	A2	20010926	JP 2000-71190	20000314
AB	The laminates , suitable for use on image display screens, comprise: a transparent plastic film substrate ; a hard coating layer contg. Al ₂ O ₃ , SiO ₂ , TiO ₂ and ZrO ₂ ; a transparent conductive plastic layer contg. metal particles; an antireflective multilayer; and a transparent plastic anticontamination layer.				
ST	antireflective conductive transparent laminate image display				
IT	Antireflective films Electromagnetic wave Laminated materials Optical dispersion Optical imaging devices Polymerization Refractive index (antireflective conductive transparent laminates and image display app.)				
IT	Polyesters , uses RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display				

app.)
 IT 1314-23-4, Zirconium dioxide, uses 1344-28-1, Alumina, uses 7440-22-4,
 Silver, uses 7631-86-9, Silica, uses 13463-67-7,
 Titanium oxide (TiO₂), uses 25038-59-9,
 Polyethyleneterephthalate, uses 29570-58-9, DPHA
 RL: DEV (Device component use); USES (Uses)
 (antireflective conductive transparent laminates and image display
 app.)
 IT 7631-86-9, Silica, uses 25038-59-9,
 Polyethyleneterephthalate, uses
 RL: DEV (Device component use); USES (Uses)
 (antireflective conductive transparent laminates and image display
 app.)
 RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX
 NAME)



L72 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 2001:446167 HCAPLUS
 DN 135:47287
 TI Antifogging laminated films with good prevention of water drops from
 staying on surface
 IN Miyauchi, Tatsuo
 PA Spatta K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B32B009-00
 ICS B32B015-08; C23C014-08; C23C016-06
 CC 38-3 (Plastics Fabrication and Uses)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001162715	A2	20010619	JP 1999-376399	19991209
AB	The films comprise a substrate layer , a metal layer , and a surface metal layer contg. photocatalysts. Thus, a film having a layer of sputtered SiO ₂ and a top layer of sputtered alloys contg. Ag and TiO ₂ was manufd.				
ST	antifogging laminate film silver titania photocatalyst;				

IT silica sputtering laminate film
 IT Antifogging agents
 Laminated plastic films
 Photolysis catalysts
 Sputtering
 (antifogging **laminated** films having photocatalyst-contg.
 sputtered **metal** alloy layers)
 IT Polyamides, uses
 Polyesters, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (antifogging **laminated** films having photocatalyst-contg.
 sputtered **metal** alloy layers)
 IT Mirrors
 (automotive; antifogging **laminated** films having
 photocatalyst-contg. sputtered **metal** alloy layers)
 IT 7631-86-9, Silica, uses 215712-93-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (antifogging **laminated** films having photocatalyst-contg.
 sputtered **metal** alloy layers)
 IT 7631-86-9, Silica, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (antifogging **laminated** films having photocatalyst-contg.
 sputtered **metal** alloy layers)
 RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:900309 HCAPLUS

DN 136:30435

TI **Laminate of metal layer and
 insulating substrate** comprised of **fibrous
 filler and thermoplastic and thermosetting
 resins**

IN Ikegawa, Naoto; Kondo, Naoyuki; Nakata, Kimiaki

PA Matsushita Electric Works, Ltd., Japan

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM H05K001-03

ICS C23C014-20

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1162866	A2	20011212	EP 2001-250200	20010605
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002060522	A2	20020226	JP 2001-171104	20010606
PRAI	JP 2000-168461	A	20000606		
AB	The invention relates to a laminate comprising a metal layer which is formed on an covers the surface of an insulating substrate activated by the plasma treatment by any method selected from a sputtering method, a vacuum depositing				

method and an ion plating method. The substrate is obtained by molding a resin compn. contg. 20-150 parts by mass of a **fibrous filler** having an av. **fiber** diam. of 0.1-5 .mu.m and an av. fiber length of 10-50 .mu.m relative to 100 parts by mass of a base resin comprising a **thermoplastic** resin and a **thermosetting** resin.

ST **laminate metal layer substrate**
fibrous filler thermoplastic
thermosetting resin

IT Vapor deposition process
(ion plating, **metal covering; laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Fillers**
Laminated materials
Molding
(**laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Fibers**
Glass fibers, processes
Kaolin, processes
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(**laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Nitrile rubber, processes**
Polyamides, processes
Polysulfones, processes
Polythiophenylenes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(**laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Sputtering**
(**metal covering; laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Liquid crystals, polymeric**
(**polyesters; laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Polyimides, processes**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(**polyether-; laminate of metal layer and insulating substrate** comprised of **fibrous filler and thermoplastic and thermosetting resins**)

IT **Polyethers, processes**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(polyimide-; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)

- IT Plastics, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (thermoplastics; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT Plastics, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (thermosetting; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 11121-16-7, Aluminum borate 12047-27-7
 , Barium titanate, processes 12049-50-2, Calcium titanate 12673-69-7, Potassium titanate
 RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 13983-17-0, Wollastonite (Ca(SiO₃)) 24968-12-5
 , Polybutylene terephthalate 25038-54-4, Nylon 6, processes 25667-42-9, Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene) 31694-16-3 32131-17-2, Nylon 66, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 7440-50-8, Copper, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (metal layer; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 9003-18-3
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (nitrile rubber, laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 88-96-0, 1,2-Benzenedicarboxamide
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (polymer of; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 7631-86-9, Silica, processes
 RL: DEV (Device component use); MOA (Modifier or additive use); PEP

(Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (spherical filler; laminate of metal layer
 and insulating substrate comprised of
 fibrous filler and thermoplastic and
 thermosetting resins)

IT 11121-16-7, Aluminum borate 12047-27-7
 , Barium titanate, processes 12049-50-2, Calcium
 titanate

RL: DEV (Device component use); MOA (Modifier or additive use); PEP
 (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (laminate of metal layer and
 insulating substrate comprised of fibrous
 filler and thermoplastic and thermosetting
 resins)

RN 11121-16-7 HCAPLUS

CN Boric acid, aluminum salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 12047-27-7 HCAPLUS

CN Barium titanium oxide (BaTiO₃) (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 12049-50-2 HCAPLUS

CN Calcium titanium oxide (CaTiO₃) (8CI, 9CI) (CA INDEX NAME)

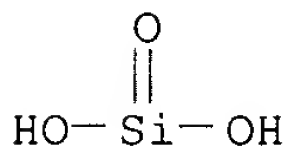
Component	Ratio	Component Registry Number
=====	=====	=====
O	3	17778-80-2
Ca	1	7440-70-2
Ti	1	7440-32-6

IT 13983-17-0, Wollastonite (Ca(SiO₃)) 24968-12-5
 , Polybutylene terephthalate 25038-54-4, Nylon 6, processes
 25667-42-9, Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene)
 31694-16-3 32131-17-2, Nylon 66, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PROC (Process); USES (Uses)
 (laminate of metal layer and
 insulating substrate comprised of fibrous
 filler and thermoplastic and thermosetting
 resins)

RN 13983-17-0 HCAPLUS

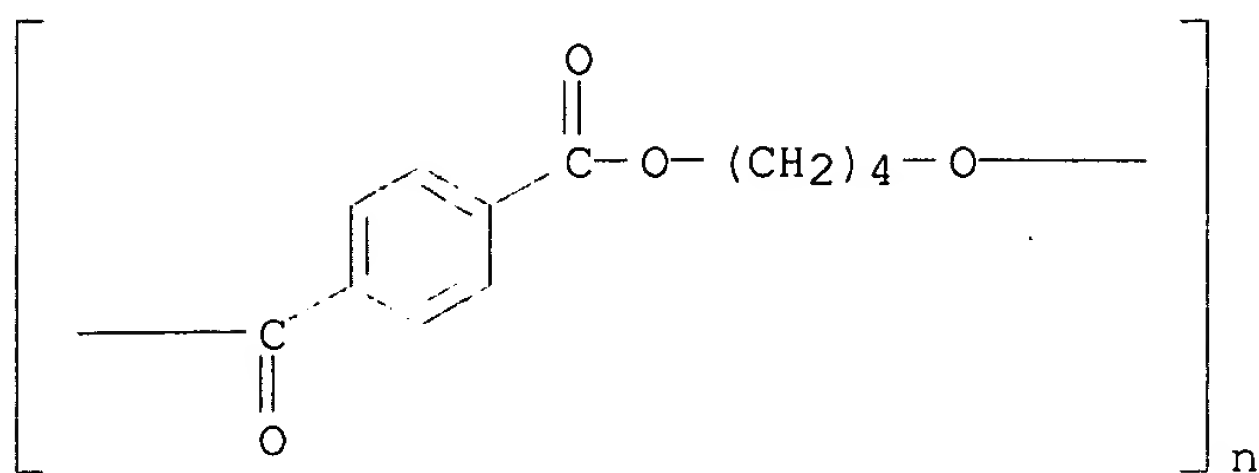
CN Wollastonite (Ca(SiO₃)) (9CI) (CA INDEX NAME)



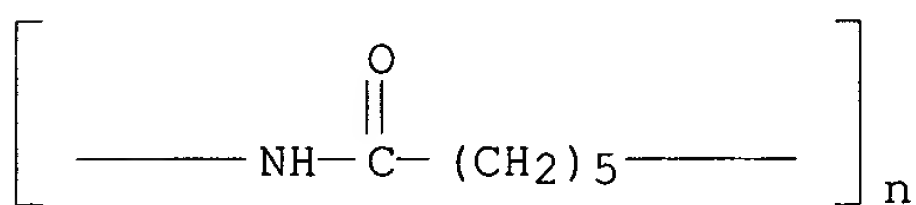
Ca

RN 24968-12-5 HCAPLUS

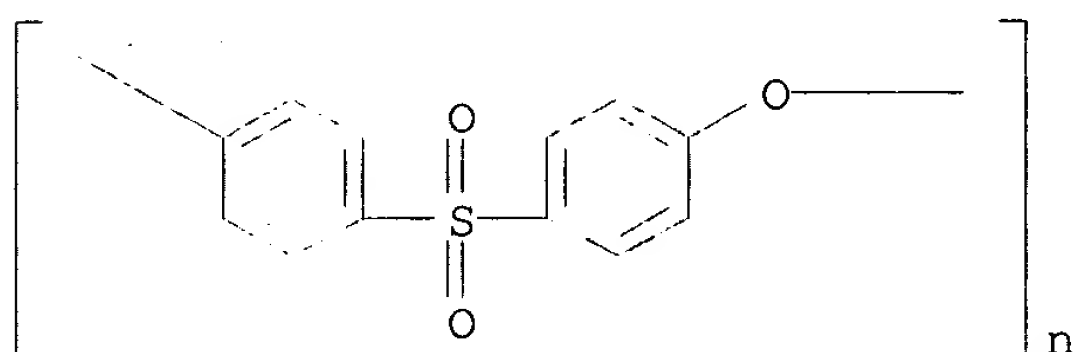
CN Poly(oxy-1,4-butanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX
 NAME)



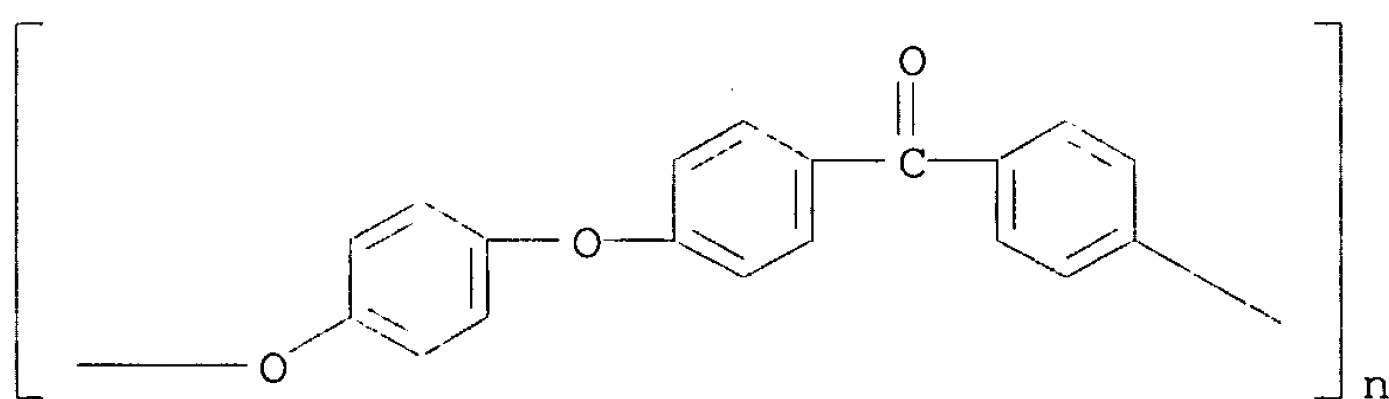
RN 25038-54-4 HCAPLUS
 CN Poly[imino(1-oxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)



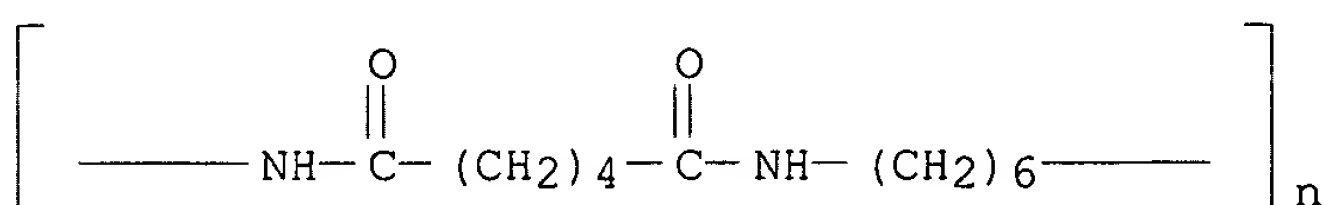
RN 25667-42-9 HCAPLUS
 CN Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



RN 31694-16-3 HCAPLUS
 CN Poly(oxy-1,4-phenyleneoxy-1,4-phenylenecarbonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



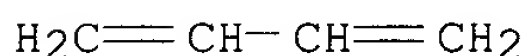
RN 32131-17-2 HCAPLUS
 CN Poly[imino(1,6-dioxo-1,6-hexanediyl)imino-1,6-hexanediyl] (9CI) (CA INDEX NAME)



IT 9003-18-3
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (nitrile rubber, **laminate of metal layer** and **insulating substrate** comprised of **fibrous filler** and **thermoplastic** and **thermosetting** resins)
 RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)
 CM 1
 CRN 107-13-1
 CMF C3 H3 N



CM 2
 CRN 106-99-0
 CMF C4 H6



IT 7631-86-9, Silica, processes
 RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (spherical filler; **laminate of metal layer** and **insulating substrate** comprised of **fibrous filler** and **thermoplastic** and **thermosetting** resins)
 RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



L72 ANSWER 8 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD
 AN 2001-451730 [48] WPIX
 DNN N2001-334409 DNC C2001-136437
 TI Redirecting chemical vapor deposition of material to produce coatings on substrate, involves selectively changing localized environment of energy source to redirect gases by applying source of pressure differential.
 DC A17 A23 A85 L03 P42 P73 V02 V06 X11 X12
 IN DALZELL, W J; DESHPANDE, G; HENDRICK, M; HUNT, A T; HWANG, J T; LAYE, N S; OLJACA, M; PODA, A; SHANMUGHAM, S; SHOUP, S S; TOMOV, T
 PA (MICR-N) MICROCOATING TECHNOLOGIES INC
 CYC 94
 PI WO 2001047704 A1 20010705 (200148)* EN 46p B32B005-16
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
 NL OA PT SD SE SL SZ TR TZ UG ZW
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
 DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC

LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
 SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
 AU 2001027402 A 20010709 (200164) B32B005-16
 ADT WO 2001047704 A1 WO 2000-US35416 20001221; AU 2001027402 A AU 2001-27402
 20001221
 FDT AU 2001027402 A Based on WO 200147704
 PRAI US 2000-234575P 20000922; US 1999-474491 19991229
 IC ICM B32B005-16
 ICS B05B007-00; B05B007-16; B05D001-08; B05D001-36; B32B005-00;
 B32B009-00; B32B009-04; B32B013-12; B32B015-08; B32B027-00;
 B32B027-08; B32B027-36; C23C004-04; C23C004-08; C23C004-10
 AB WO 200147704 A UPAB: 20010829

NOVELTY - Energy source activates precursor introduced into localized environment, within gases which are directed along path (I). At least one source of pressure differential is applied to localized environment of energy source, such that localized environment is selectively changed to redirect gases from path (I) to redirected path (II). Gases are contacted to substrate surface to form at least part of material.

DETAILED DESCRIPTION - Precursor is introduced into localized environment of at least one energy source. Energy source activates precursor within gases which are directed along path (I). At least one source of pressure differential is applied to localized environment of energy source, such that localized environment is selectively changed to redirect gases from path (I) to redirected path (II). Thereby, gases are made to contact surface and form at least part of material.

INDEPENDENT CLAIMS are also included for the following:

(i) Apparatus for chemical vapor deposition of material, comprises a nozzle for directing a precursor material along a path (I), an ignition mechanism for igniting the precursor material and for vaporizing at least a portion of the precursor material, and a redirecting jet for creating a pressure differential along the path (I) to redirect the partially vaporized material from path (I) to redirected path (II). The partially vaporized material is made to contact a surface to form the material;

(ii) **Insulator** for an electrical conductor or superconductor which consists of thin film coating of at least one electrically **insulating** oxide;

(iii) **Insulated** electrical conductor or superconductor which comprises electrical **insulator**; and

(iv) A **laminate** which comprises a polymer-containing material coated with a combustion, chemical vapor-deposited or redirected chemical deposited barrier layer. Barrier **layer** is coating of **metal**, an oxide or a mixture of **metal** and oxide, that inhibits gas and vapor transmission and/or provides a scratch resistant surface.

USE - For chemical vapor deposition to form powders and coatings on substrate, and for production of barrier or electrochemical coatings on polymers, as well as protective or **insulating** coating for metal foil and electromechanical windings. The chemical vapor deposition method is used for forming thin film **insulating** oxide coatings on the surface of conductive or super conductive wires. The redirecting methods are also useful for producing powders that can be collected for further processing and for forming metal oxide barrier coatings for polymeric food and beverage containers.

ADVANTAGE - A uniform coating is obtained by chemical vapor deposition method by redirecting the energy source and/or hot gases, thereby produced. The energy source and/or active deposition gases are activated, redirected and redistributed to control the material properties, decrease the gas temperature or increase the substrate area coated by the deposition material. By directing the deposition gases, vapor clusters and particles in a direction different from heat produced

by energy source, it is possible to control the substrate temperature to allow deposition without damaging the substrate. A more effective distribution of deposition species in the gases is enabled. At the same time, precursor are allowed to attain the appropriate temperatures for forming the coating composition, while avoiding over heating and damaging the substrate. The amount of heat transferred to the substrate is reduced. The redirected gases are more thoroughly mixed and therefore provide a more homogeneous coating and heat distribution on substrate. The efficiency of the electromagnetic device is increased since the thickness of **insulators** on the windings of the device is reduced and **insulation** between adjacent windings and other components is increased. Thin film layers with excellent adhesion are obtained.

Dwg.0/11

FS CPI EPI GMPI

FA AB

MC CPI: A99-A; L03-A01B3; L03-A01C

EPI: V02-H01B; V06-M11B; X11-J08B; X12-C01D2; X12-D06A; X12-D06A1;
X12-D07B9; X12-E02B

L72 ANSWER 9 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-488488 [53] WPIX

DNN N2001-361478 DNC C2001-146549

TI Electrochemical capacitor, for military and commercial applications, comprises polymer electrolyte including solid base polymer material in form of thin polymer, such as **polyester**, polypropylene.

DC A85 L03 M11 V01 X16

IN MUNSHI, M Z A

PA (LITH-N) LITHIUM POWER TECHNOLOGIES INC

CYC 93

PI WO 2001039305 A1 20010531 (200153)* EN 45p H01M006-18

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001022512 A 20010604 (200153) H01M006-18

ADT WO 2001039305 A1 WO 2000-US32275 20001122; AU 2001022512 A AU 2001-22512
20001122

FDT AU 2001022512 A Based on WO 200139305

PRAI US 1999-449443 19991125

IC ICM H01M006-18

AB WO 200139305 A UPAB: 20010919

NOVELTY - The electrochemical capacitor comprises a polymer electrolyte including solid base polymer material in the form of thin polymer, such as **polyester** (PET), polypropylene (PP), polyethylene naphthalate (PEN), polycarbonate (PC), **polyphenylene sulfide** (PPS), polyvinylidene-fluoride (PVDF), polytetrafluoroethylene (PTFE) or their mixtures.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for;

(1) Manufacture of polymer electrolyte for electrochemical capacitor, which involves dissolving PVDF and acrylate monomer or oligomer in a hydrocarbon solvent to form polymer solution, casting the polymer solution into thin film by evaporating hydrocarbon solvent, soaking the thin film in a predetermined liquid electrolyte solution containing salt, and curing acrylate monomer or oligomer;

(2) Manufacture of dimensionally stable, highly resilient polymer solid-solution blend film for electrochemical capacitor which involves mixing PVDF and AMPS homogeneously to form a copolymer blend. A very high surface area inorganic filler having average particle size diameter of

less than 0.05 micro m, surface area of 100 m²/g and concentration of 0.1-30 weight% is dispersed in the copolymer blend. The obtained mixture is cast into a thin film. Subsequently, the thin film is soaked in a liquid solvent electrolyte for absorption and retention of electrolyte in the thin film. The porosity and mechanical stability of the thin film are enhanced by the presence of inorganic filler;

(3) Thin film electrochemical capacitor comprising (a) resilient flexible polymeric electrolyte thin film including base polymer dispersed with inorganic filler to increase its surface area and porosity, (b) liquid electrolyte comprising liquid polymer, (c) organic solvent electrolyte and salt solution impregnated in thin film, and (d) a pair of spaced-apart flexible thin film electrodes. Each electrodes are adhered to a current connector, and the thin film is tightly sandwiched between the electrodes;

(4) An electrochemical capacitor electrode comprising ultra thin film metal substrate (which is etched to increase its intrinsic surface area) for cathode or anode substrate of electrochemical capacitor. The ultra thin film metal substrate has thickness of 1-10 micro m and comprises metallic material selected from aluminum, copper, nickel, **titanium**, stainless steel and alloy including inconel;

(5) Method for coating ultra thin film metallized polymer substrate for thin film electrochemical capacitor with thin film active anode and cathode materials. Anode and cathode materials are prepared to a size suitable for application to thin film metallized polymer substrate. The prepared materials are then applied directly to either sides of thin film metallized polymer substrate to form thin film of anode and cathode materials of desired thickness;

(6) Fabrication of thin film electrochemical capacitor which involves forming thin film electrode by double **metallizing** polymer substrate for applying activated electrode material, and **laminating** separate anode and cathode elements respectively on either sides of double-**metallized** polymer substrate to provide a highly flexible electrode for capacitor;

(7) Bipolar electrode for capacitor, comprising flexible polymer **substrate** of 0.5-50 micro m thickness, two **metallization layers** of 1 micro m thickness formed on each side of **substrate**, and an ultra-thin anode **layer** formed over **metallization layer**. The ratio of **substrate** thickness to anode or cathode layer thickness is less than 0.5, and surface resistivity for each anode and cathode layer is less than 0.1 ohm/square;

(8) Formation of thin bipolar capacitor which involves **laminating** together layer(s) of bipolar unit between a layer of anode and cathode to provide a stack having laminar ends. The anode and cathode comprises a **metallized** polymer current collectors. The anode and cathode are oriented and current collectors are applied to laminar ends. The bipolar unit comprises a flexible polymer **substrate** of 0.5-50 micro m thickness optionally dispersed with electrically conductive material, two **metallization layers** of 1 micro m thickness formed on either sides of polymer **substrate**, ultra-thin anode and cathode **layers** sequentially formed over **metallization layer** and **layer** of solid polymer electrolyte formed over anode or cathode layer.

USE - For military and commercial applications.

ADVANTAGE - Electrochemical capacitors with ultra-thin current collectors having improved energy density, power density, higher capacity utilization, higher cycle life, greater charge-discharge efficiencies, lower ESR, greater safety and greater reliability, is produced economically at high speed. The capacitor has a base polymer material that

is dimensionally stable in aqueous or non-aqueous solvents and temperature, and exhibits little or no swelling characteristics when contact with liquid solvents.

Dwg.0/4

FS CPI EPI

FA AB

MC CPI: A12-E07B; L03-B03A; M11-B05

EPI: V01-B01A; V01-B01B1; V01-B01D; V01-B01G; X16-E01C; X16-J01A; X16-L02

L72 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:344299 HCAPLUS

DN 132:335635

TI **Laminated** microporous **polyester** films with excellent thermal **insulating** properties and **metal** cans **laminated** therewith

IN Hibiya, Takashi; Miki, Takatoshi

PA Mitsubishi Chemical Polyester Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B32B027-36

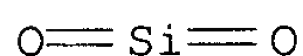
ICS B32B005-18; B32B007-02; B32B015-08; B65D001-12; C08J005-18;
C08J009-00; B29C055-12; B29K067-00; B29K105-04; B29K105-06;
B29L009-00; C08L067-02

CC 38-3 (Plastics Fabrication and Uses)

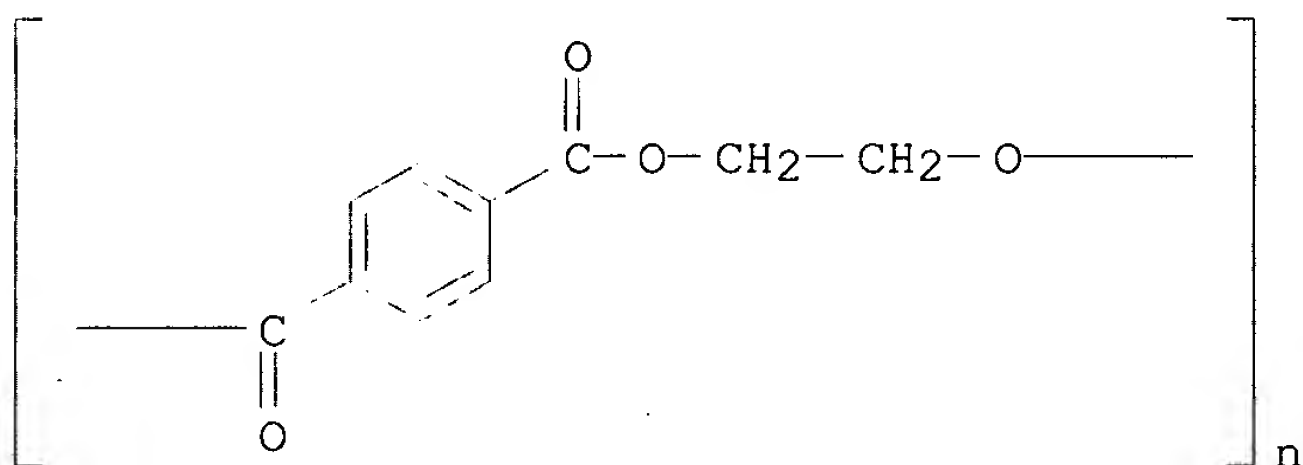
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000141569	A2	20000523	JP 1998-320292	19981111
AB	The films with heat shrinkage .gtoreq.2.0% at 110.degree. have (A) microporous polyester layers with d. 0.50-1.00 g/cm3 and (B) polyester layers with d. .gtoreq.1.10 g/cm3 on at least one side of A. Thus, a biaxially oriented 3-layer film comprising a 13% cryst. polypropylene-contg. PET middle layer and 0.12% SiO2 -contg. PET surface layers showed 60.degree. gloss 99%, 20.degree. gloss 44%, and smooth surface after lamination on a metal can.				
ST	polyester multilayer film metal can lamine te ; thermal insulator microporous PET polypropylene blend; heat shrinkage PET silica film lamination				
IT	Cans Heat-shrinkable films Laminated plastic films Thermal insulators (laminated microporous polyester films for metal cans with good thermal insulating properties)				
IT	Polyesters , uses RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (laminated microporous polyester films for metal cans with good thermal insulating properties)				
IT	7631-86-9, Silica , uses 9003-07-0, Polypropylene 13463-67-7, Titanium oxide, uses RL: MOA (Modifier or additive use); USES (Uses) (laminated microporous polyester films for metal cans with good thermal insulating properties)				
IT	25038-59-9, Poly(ethylene terephthalate), uses RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)				

(laminated microporous polyester films for
metal cans with good thermal insulating properties)
IT 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(laminated microporous polyester films for
metal cans with good thermal insulating properties)
RN 7631-86-9 HCAPLUS
CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 25038-59-9, Poly(ethylene terephthalate), uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(laminated microporous polyester films for
metal cans with good thermal insulating properties)
RN 25038-59-9 HCAPLUS
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX
NAME)



L72 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:105106 HCAPLUS
DN 132:138533
TI Gas-barrier transparent laminates with good adhesion, packaging materials,
and their packaged products
IN Sasaki, Noboru; Sekiguchi, Mamoru; Hayashi, Kenji; Komori, Tsunenori;
Matsuo, Ryukichi
PA Toppan Printing Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B32B009-00
ICS B32B007-02; B32B027-40; B65D065-40
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 17, 63, 67
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000043182	A2	20000215	JP 1998-218226	19980731
AB	The laminates , useful for packaging materials and bags for foods, pharmaceuticals, etc., consist of transparent plastic substrates , transparent primer layers comprising composites from organosilanes R'Si(OR)3 (R' = alkyl, vinyl, glycidoxypropyl, etc.; R = CnH2n+1 alkyl; n .gtoreq.1) or their hydrolyzates, acrylic polyols, and				

isocyanates on .gtoreq.1 side of the **substrates**, 5-300 nm-thick vapor-deposited thin film layers of inorg. oxides, and gas-barrier composite films contg. water-sol. polymers, inorg. **layered** compds., and **metal** alkoxides $M(OR)_n$ ($M = \text{metal}$; $R = C_nH_{2n+1}$ alkyl; $n \geq 1$), where the interlayer spacing of the layered compds. in the composite films is .gtoreq.1.2 times that of the compds. before film formation. Thus, a transparent laminate of a **PET** substrate, a primer layer contg. composites prepd. from $Si(OEt)_4$, epoxycyclohexylethyltrimethoxysilane, an acrylic polyol, and TDI in the presence of $SnCl_2$, a .apprx.20 nm-thick vapor-deposited Al_2O_3 layer, and a gas-barrier layer (interlayer spacing enlargement ratio 2.17) contg. a 35:3:62 mixt. of montmorillonite, poly(vinyl alc.), and $Si(OEt)_4$ showed O permeability 0.2 mL/m²-day and high lamination strength after retort sterilization at 125.degree. for 30 min.

ST transparent laminated film packaging acrylic siloxane; oxide layered compd gas barrier packaging; polyvinyl alc montmorillonite silane packaging film

IT Polyurethanes, uses

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(acrylic-polysiloxane-; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Polysiloxanes, uses

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(acrylic-polyurethane-; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Silanes

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(alkoxy; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT **Metal** alkoxides

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(composites with montmorillonite; delamination- and retort-resistant transparent **laminated** packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Bags

Food packaging materials

Laminated plastic films

Polymerization catalysts

(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Intercalation compounds

Oxides (inorganic), uses

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Packaging materials

(films, gas-impermeable, transparent; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Packaging materials

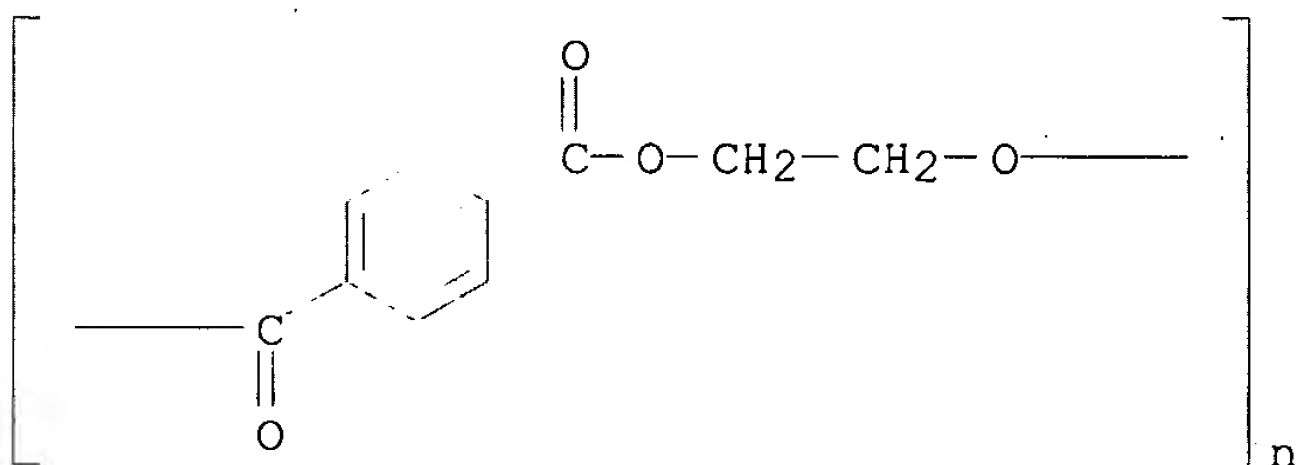
(films, heat-sealable, multilayer; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

- IT Smectite group minerals
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(intercalation complexes; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT Acrylic polymers, uses
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(polyurethane-siloxane-; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT Packaging materials
(retort pouches; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT **Polyesters**, uses
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(substrate; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT Polymers, uses
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(water-sol., composites with montmorillonite; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 7440-31-5D, Tin, alkoxides 7772-99-8, Tin chloride, uses 57572-63-1, Tin oxychloride
RL: CAT (Catalyst use); USES (Uses)
(catalyst in primer layers; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 78-10-4DP, Tetraethoxysilane, polymers with epoxycyclohexylethyltrimethoxy silane, acrylic polyol, and TDI 1318-93-0DP, Montmorillonite, intercalation complexes with poly(vinyl alc.) and Et silicate 3388-04-3DP, Epoxycyclohexylethyltrimethoxysilane, polymers with acrylic polyol and TDI 9002-89-5DP, Poly(vinyl alcohol), intercalation complexes with montmorillonite and Et silicate 11099-06-2DP, Tetraethoxysilane homopolymer, intercalation complexes with montmorillonite and poly(vinyl alc.) 26471-62-5DP, TDI, polymers with alkoxysilanes and acrylic polyol
RL: FFD (Food or feed use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 1344-28-1, Aluminum oxide, uses 7631-86-9, Silicon oxide, uses
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 555-31-7D, Triisopropoxyaluminum, intercalation complexes 1309-48-4, Magnesia, uses 7429-90-5D, Aluminum, alkoxides, intercalation complexes 7440-21-3D, Silicon, alkoxides, intercalation complexes 7440-32-6D, **Titanium**, alkoxides, intercalation complexes 7440-67-7D, Zirconium, alkoxides, intercalation complexes
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(delamination- and retort-resistant transparent laminated packaging

films having polymer-montmorillonite composite gas-barrier layers)
 IT 25038-59-9, PET (polyester), uses
 RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (substrate; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
 IT 7631-86-9, Silicon oxide, uses
 RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
 RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 25038-59-9, PET (polyester), uses
 RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (substrate; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
 RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 2000:23462 HCAPLUS
 DN 132:65192
 TI Transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect
 IN Nishiyama, Kiminori
 PA Teijin Ltd., Japan
 SO Jpn. Kokai Tokyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B32B007-02
 ICS B32B009-00; B32B015-04
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 74
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 2000006291 A2 20000111 JP 1998-175738 19980623
 AB The film esp. useful for CRT and LCD comprises a transparent thermoplastic film and a **laminated** layer consisting of **metal** and dielec. substance, where the thermoplastic film has glass temp. .gtoreq.100.degree., the film, on the **laminated** side, has middle line av. surface roughness (Ra) .ltoreq.50 nm, 10 point av. roughness (Rz) .ltoreq.500 nm, and the resulting **laminated** film has visible light transmittance (Tvis) .gtoreq.60% and selective transmittance (Tvis/(Tvis + Tnir) x 100).gtoreq.80%, Tnir = near IR transmittance. Vacuum sputtering sequentially a 30-nm In2O3, a 15-nm Ag layer, and a 30-nm In2O3 on a 50-.mu.m biaxially oriented poly(ethylene 2,6-naphthalate) film with Ra 7 nm and Rz 120 nm and bonding to a glass plate via an adhesive gave a laminated film with breaking strength 55 kg/mm2, surface resistivity 6.8 .OMEGA./box., and good visible light transmittance and selective transmittance.
 ST laminated film strength dimensional stability electromagnetic shield; CRT LCD laminated film electromagnetic shield
 IT Electric **insulators**
 Electromagnetic shields
 Laminated plastic films
 (transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)
 IT **Polyesters**, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)
 IT 1312-43-2, Indium trioxide 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium dioxide, uses 1314-61-0, Tantalum pentoxide 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7631-86-9, **Silicon dioxide**, uses 13463-67-7, **Titanium** dioxide, uses 18282-10-5, Tin dioxide 24968-11-4, Poly(ethylene 2,6-naphthalate) 25230-87-9, Poly(ethylene 2,6-naphthalate) 113443-18-8, Silicon monooxide
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)
 IT **7631-86-9, Silicon dioxide**, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)
 RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



L72 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:757007 HCAPLUS
 DN 132:8303
 TI Transparent multilayer electromagnetic wave reflection preventive components and reflection prevention thereof
 IN Nagano, Toshiaki; Maki, Tetsu
 PA Kansai Paint Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM H05K009-00
 ICS B32B009-00
 CC 76-14 (Electric Phenomena)
 Section cross-reference(s): 38, 57, 77

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11330775	A2	19991130	JP 1998-134766	19980518
AB	The reflection preventive components have an electromagnetic wave reflection preventive metal layer which is laminated by ITO transparent multilayer units, each of which is further a multilayer comprising successively laminated by a patterned ITO layer, an optional transparent support layer, a transparent polymer layer, and an optional another transparent support layer. The transparent polymer layer may contains powd. silica (size .ltoreq.100 .mu.m) as a dielec. material. The multilayer components are easily manufd. and light-weighted.				
ST	ITO transparent pattern conductor electromagnetic wave shield reflection prevention				
IT	Phenolic resins, properties RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (aminoplast-, acrylic polymer mixt.; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electrooptical reflection Magnetooptical reflection (electromagnetooptical, multilayer, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electromagnetic shields (laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Acrylic polymers, properties RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (melamine polymer mixt.; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Aminoplasts RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (phenolic, acrylic polymer mixt.; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electrooptical reflection (prevention of; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electric insulators (silica powder; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Polyesters , properties RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses) (support plate, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				

IT 7631-86-9, Silica, uses 12047-27-7, Barium titanate, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powder; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

IT 25038-59-9, Polyethylene terephthalate, properties
 RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (support plate, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

IT 50926-11-9, ITO
 RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

IT 7631-86-9, Silica, uses 12047-27-7, Barium titanate, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powder; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

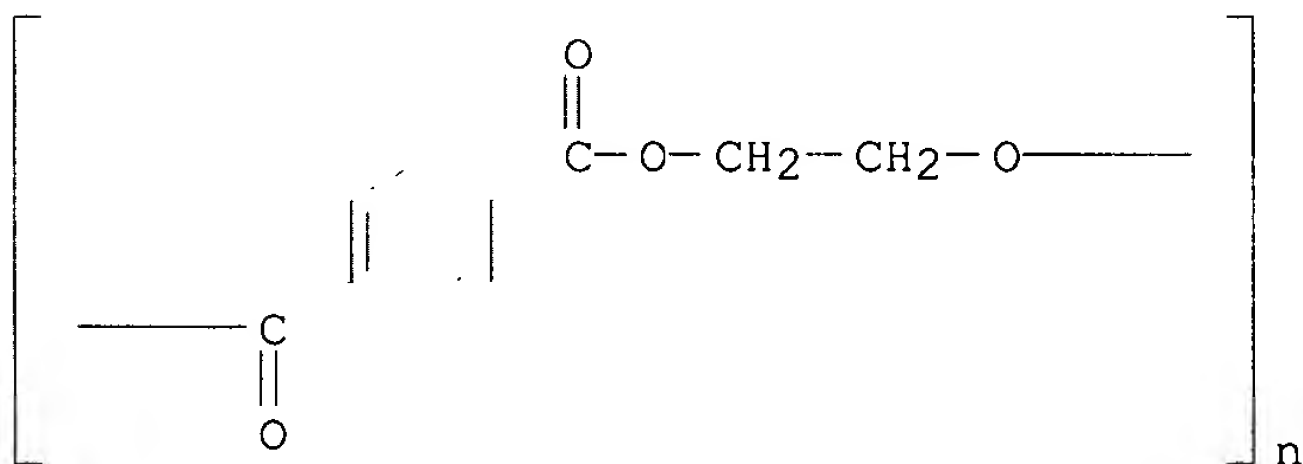


RN 12047-27-7 HCAPLUS
 CN Barium titanium oxide (BaTiO3) (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 25038-59-9, Polyethylene terephthalate, properties
 RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (support plate, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:463716 HCAPLUS
 DN 131:103475
 TI Heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals

IN Monden, Toshiaki; Seki, Masao
 PA Toray Industries, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM D06M011-46
 ICS B60J007-10; B65D081-38; B65G003-02; D06M011-45; D06M011-83;
 F16L059-08; D06M015-248; D06M017-00
 CC 40-5 (Textiles and Fibers)
 Section cross-reference(s): 17, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11200240	A2	19990727	JP 1998-2153	19980108
AB	The heat- insulative sheets comprise sheets coated with thermoplastic polymer compns. optionally contg. compds. exhibiting radio wave reflection amt. .gtoreq.50% and have one or two sides of the sheets laminated with a layer comprising metals and optionally having radio wave reflection amt. .gtoreq.50%. The sheets are useful for storage or transportation of beer, juices, and wine with good temp. retention. A woven sail cloth of polyester fibers was coated with a compn. contg. PVC 100, dioctyl phthalate 60, stabilizer 5, CaCO3 10, and laminated with Al foil using an adhesive to give a heat- insulating sheet exhibiting change of temp. of H2O in a juice can 1.9.degree./6 h on filling the can with H2O at 25.degree., covering the can with the sheet, and exposing the can to sunlight with av. temp. 35.degree..				
ST	polyester fabric PVC aluminum laminate heat insulative ; fabric thermoplastic metal laminate heat insulative ; juice transportation heat insulative sheet; wine transportation heat insulative sheet; beer transportation heat insulative sheet				
IT	Polyesters , uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (coatings; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)				
IT	Laminated materials Textiles Thermal insulators (heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)				
IT	Polyester fibers, uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)				
IT	Metals , uses RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)				
IT	Beer Fruit and vegetable juices Wine				

(storage or transportation of; heat-reflective thermally
insulating sheets of laminates of thermoplastic
polymer-coated sheets with metals for)

IT Plastics, uses
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM
(Technical or engineered material use); PROC (Process); USES (Uses)
(thermoplastics, coatings; heat-reflective thermally insulating
sheets of laminates of thermoplastic polymer-coated sheets
with metals)

IT 1314-13-2, Zinc oxide, uses 7631-86-9, Silicon oxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(additive; heat-reflective thermally insulating sheets of
laminates of thermoplastic polymer-coated sheets with
metals)

IT 13463-67-7, Titanium oxide, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(additive; heat-reflective thermally insulating sheets of
laminates of thermoplastic polymer-coated sheets with
metals)

IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene
24937-78-8, Ethylene-vinyl acetate copolymer
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM
(Technical or engineered material use); PROC (Process); USES (Uses)
(coating; heat-reflective thermally insulating sheets of
laminates of thermoplastic polymer-coated sheets with
metals)

IT 7429-90-5, Aluminum, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES
(Uses)
(laminates with PVC-coated polyester fabrics;
heat-reflective thermally insulating sheets of
laminates of thermoplastic polymer-coated sheets with
metals)

IT 7631-86-9, Silicon oxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(additive; heat-reflective thermally insulating sheets of
laminates of thermoplastic polymer-coated sheets with
metals)

RN 7631-86-9 HCAPLUS
CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:849648 HCAPLUS
DN 123:342818
TI Sheet materials contg. metallic coating layers with interference colors
IN Okumura, Haruichiro; Negishi, Takao
PA Toray Industries, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM D06M011-83
ICS B32B007-02; B32B009-00; B32B015-04; D06Q001-04
ICI D06M101-32
CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 40

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07189122	A2	19950725	JP 1993-335130	19931228
	JP 3198768	B2	20010813		
AB	The title sheets with interference colors comprise sheet substrates , successively laminated with (A) reflective metal films composed of .gtoreq.1 metals selected from Ti, Ni, Co, and Pt, (B) transparent metal layers , and (C) translucent metal films. Thus, PET fabric was vapor deposited with Ti, SiO, and Cr successively, heated at 170.degree. for 2 min, coated with di-Me polysiloxane, and heated at 130.degree. for 2 min to give an iridescent test piece.				
ST	interference color sheet metal layer				
IT	Films (sheet materials with iridescent interference color with reflective metal layers, transparent metal layers, and translucent metal layers)				
IT	Polyester fibers, uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (substrates ; sheet materials with iridescent interference color with reflective metal layers , transparent metal layers , and translucent metal layers)				
IT	1312-43-2, Indium oxide (In2O3) 1344-28-1, Aluminum oxide (Al2O3), uses 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses 7440-21-3, Silicon, uses 7440-22-4, Silver, uses 7440-32-6, Titanium , uses 7440-47-3, Chromium, uses 7440-48-4, Cobalt, uses 7440-57-5, Gold, uses 7631-86-9, Silicon dioxide , uses 7783-40-6, Magnesium fluoride (MgF2) 12137-20-1, Titanium monoxide 13463-67-7, Titanium dioxide, uses 18282-10-5, Tin oxide (SnO2) 50926-11-9, ITO 113443-18-8, Silicon oxide (SiO)				
	RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (sheet materials with iridescent interference color with reflective metal layers, transparent metal layers, and translucent metal layers)				
IT	7631-86-9, Silicon dioxide , uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (sheet materials with iridescent interference color with reflective metal layers, transparent metal layers, and translucent metal layers)				
RN	7631-86-9 HCAPLUS				
CN	Silica (7CI, 8CI, 9CI) (CA INDEX NAME)				



L72 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:954798 HCAPLUS

DN 123:347478

TI **Metal** foils or **laminates** precoated with vapor-deposited layers and an adhesion-promoting layer

IN Chiang, Shih-Kao; Prokop, Mary K.; Kalnoki-Kis, Tibor

PA Gould Electronics Inc., USA

SO Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DT Patent
 LA English
 IC ICM C23C028-00
 ICS C23C016-56; B32B015-20
 CC 56-6 (Nonferrous Metals and Alloys)
 Section cross-reference(s): 42, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 678596	A1	19951025	EP 1995-302699	19950421
	R: FR, GB, IT				
	CA 2147334	AA	19951023	CA 1995-2147334	19950419
	BR 9501605	A	19951219	BR 1995-1605	19950420
	AU 9517826	A1	19951102	AU 1995-17826	19950421
	CN 1112877	A	19951206	CN 1995-104712	19950421
	JP 08041625	A2	19960213	JP 1995-97326	19950421
	US 5709957	A	19980120	US 1996-713100	19960916
	US 6248401	B1	20010619	US 1997-846080	19970425
PRAI	US 1994-232820	A	19940422		
	US 1996-713100	A3	19960916		

OS MARPAT 123:347478

AB **Metal** foils (esp. Cu foils for elec. printed circuits) are typically precoated with vapor-deposited Zn, coated with **SiO2** or **Al2O3**, and treated with an adhesion-promoting top layer (esp. organosilane or polymer resin), and are suitable for manuf. of **laminates**.

The foils can be precoated on one or both sides, and can be coated with elec. **insulating** top layer over the adhesion-promoting layer.

The Cu foils manufd. by electrodeposition and finished by the precoating can be bonded to epoxy-type boards for elec. printed-circuit applications.

ST copper foil precoating bonding elec circuit; zinc coating **metal** foil bonding **laminates**; organosilane bonding **metal** foil **laminates**; epoxy bonding copper foil precoating silane

IT **Metals**, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (coated; foils precoated with vapor-deposited and adhesion-promoting layers for **lamination**)

IT Polymers, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (coating interlayers; **metal** foils precoated with vapor-deposited and adhesion-promoting polymer layers for **lamination**)

IT Epoxy resins, processes

Polyesters, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (**lamination** with; **metal** foils precoated with vapor-deposited and adhesion-promoting polymer layers for **lamination**)

IT **Lamination**

(**metal** foil to dielec. strip; foils precoated with vapor-deposited and adhesion-promoting layers for **lamination**)

IT Electric **insulators** and Dielectrics

(coatings, on foils; **metal** foils precoated with vapor-deposited and adhesion-promoting polymer layers for **lamination** or elec. **insulation**)

IT Silanes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (organo-, interlayer; foils precoated with vapor-deposited **metal** and adhesion-promoting organosilane layers for **lamination**)

IT Electric circuits

(printed, boards, laminated; copper foils precoated with vapor-deposited and adhesion-promoting polymer layers for lamination or elec. **insulation**)

IT 78-10-4 2530-83-8, 3-Glycidoxypyriltrimethoxysilane
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (adhesion promoter with; copper foils precoated with vapor-deposited **metal** and adhesion-promoting organosilane layers for **lamination**)

IT 7429-90-5, Aluminum, processes 7439-95-4, Magnesium, processes
 7439-96-5, Manganese, processes 7440-02-0, Nickel, processes 7440-22-4
 , Silver, processes 7440-31-5, Tin, processes 7440-32-6,
Titanium, processes 7440-47-3, Chromium, processes 7440-48-4,
 Cobalt, processes 7440-74-6, Indium, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (coating interlayer; copper foils precoated with vapor-deposited **metal** and organosilane layers for **lamination**)

IT 1344-28-1, Alumina, processes 7631-86-9, **Silica**,
 processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (coating; **metal** foils precoated with **metal** and
 oxide and adhesion-promoting layers for **lamination**)

IT 7440-66-6, Zinc, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (coating; **metal** foils precoated with vapor-deposited zinc and
 adhesion-promoting layers for **lamination**)

IT 7440-50-8, Copper, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (lamination; foils precoated with vapor-deposited zinc and
 adhesion-promoting layers for lamination)

IT **7631-86-9, Silica**, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (coating; **metal** foils precoated with **metal** and
 oxide and adhesion-promoting layers for **lamination**)

RN 7631-86-9 HCAPLUS
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2002 ACS
 AN 1991:67429 HCAPLUS
 DN 114:67429
 TI Vapor-deposited films released from anodized metal substrates, especially
 for bonding to heat-sensitive parts
 IN Rosenfeld, Aron Marcus; Smits, Paul
 PA Alcan International Ltd., Can.
 SO Eur. Pat. Appl., 12 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C23C028-00
 ICS C25D011-02; C23C014-08
 CC 56-6 (Nonferrous Metals and Alloys)
 Section cross-reference(s): 38, 73
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 381509	A1	19900808	EP 1990-301083	19900202

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL
 US 5156720 A 19921020 US 1989-306505 19890203
 JP 02290960 A2 19901130 JP 1990-24993 19900202
 BR 9000472 A 19910115 BR 1990-472 19900202

PRAI CA 1989-589923 19890202

AB Anodized **layers** on refractory **metal** (Ta, Nb, Zr, Hf, or Ti) or alloy **substrates** (esp. in the presence of a fluoride in the bath to decrease adhesion) are vapor deposited and then mech. sepd., and can be bonded to other **substrates** not suitable for vapor deposition (esp. plastics). The anodized films are optionally coated with multiple layers for optical applications before detachment and rebonding. The process is suitable for continuous operation esp. by using a rotating drum app., and/or for manuf. of laminated composites. Thus, Ta-coated Al foil was anodized to form 61.9-nm Ta₂O₅ film, and then coated with alternating SiO₂ and TiO₂ films optimized for high reflectance at the wavelength of 550 nm. The coated foil was laminated with a **polyester** sheet, and the anodized Al foil was peeled away to expose the reflective film on the **polyester**.

ST coating anodized **metal lamination**; polymer vapor coating film bonding; optical coating lamination **polyester**

IT Paper
 Textiles
 (coatings for, rebonding of high-temp. from anodized metal substrates detached)

IT **Lamination**
 (films from detached coatings on anodized **metal** substrates for)

IT 16984-48-8, Fluoride, uses and miscellaneous

RL: USES (Uses)

(anodized and coated layers with, for detachment and rebonding)

IT 7429-90-5, Aluminum, uses and miscellaneous 7440-03-1, Niobium, uses and miscellaneous 7440-25-7, Tantalum, uses and miscellaneous 7440-32-6, **Titanium**, uses and miscellaneous 7440-58-6, Hafnium, uses and miscellaneous 7440-67-7, Zirconium, uses and miscellaneous

RL: USES (Uses)

(coating on anodized, detachable, for rebonding on heat-sensitive substrates)

L72 ANSWER 18 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1984-136132 [22] WPIX

DNN N1984-100904 DNC C1984-057365

TI Mfg. evaporated film of crystalline thermoplastic resin - by **laminating metal** light reflecting **layer** to thermoplastic polymer.

DC A17 A23 A94 P73

PA (TEIJ) TEIJIN LTD

CYC 1

PI JP 58183245 A 19831026 (198422)* 5p

ADT JP 58183245 A JP 1982-65428 19820421

PRAI JP 1982-65428 19820421

IC B32B015-08; C08J007-04

AB JP 58183245 A UPAB: 19930925

Process comprises **laminating** a light reflecting **layer** of **metal** on the surface of a base material film made of a thermoplastic polymer. The base material film has static friction coefft. between films below 0.7, limit load above 5 kg and total haze in 25 micron thickness below 3%.

Base material plastic film is pref. of crystalline thermoplastic resin such as **polyester** partic. PET, polyethylene-2,6-naphthalene dicarboxylate, polyamide, high density

polyethylene, isotactic polypropylene. Metal is e.g. Ag or Al. The biaxial orientation film is pref. obtd. by adding fine particles of inert material such as **titania**, **silica**, aluminosilicate, CaCO₃, Ca phosphate to the base material, forming into film and drawing biaxially.

Film is useful for solar film, ID card, microfilm, transparent heat **insulating** film, film for protection of window glass, etc. The film has enhanced lustre, clearness of specular image and smoothness.

0/0

FS CPI GMPI

FA AB

MC CPI: A11-C04B; A12-S06B

L72 ANSWER 19 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1979-83096B [46] WPIX

TI **Laminated** prod. having high electroconductivity - prepd. by sandwiching **metal film layer** and transparent **substrate** between layers of high refractivity transparent dielectric film.

DC A23 A32 A94 P73

PA (TEIJ) TEIJIN LTD

CYC 1

PI JP 54127990 A 19791004 (197946)*

JP 61009143 B 19860320 (198616)

PRAI JP 1978-35569 19780329

IC B32B007-02; B32B009-00; B32B015-08; B32B033-00

AB JP 54127990 A UPAB: 19930901

Metal film layer (e.g. of Ag or Ag-Cu alloy, of thickness 50-500 angstroms) and a transparent **substrate** (e.g., **PET**, polycarbonate, etc.) are sandwiched between layers of highly refractive transparent dielectric film (e.g. TiO₂ derived, e.g. from an alkyl **titanate**, **SiO₂** or **ZnO**), ≥ 1 layer of which comprises a layer formed physically of thickness ≤ 100 angstroms in direct contact with the **metal film layer** and a layer formed chemically of thickness ≥ 30 angstroms.

Laminated prods. having high electroconductivity, selective light transmission and high durability are prepd. inexpensively.

FS CPI GMPI

FA AB

MC CPI: A09-A02; A09-A03; A11-B09D; A12-S06C

L72 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 1977:553053 HCAPLUS

DN 87:153053

TI Stampable **thermoplastic** sheet reinforced with multilength fiber

IN Segal, Leon

PA Allied Chemical Corp., USA

SO U.S., 13 pp.

CODEN: USXXAM

DT Patent

LA English

IC B32B005-16

NCL 428283000

CC 37-2 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 4044188	A	19770823	US 1975-564019	19750401
PRAI	US 1972-293975		19721002		
AB	A 3-layer laminated consisting of 2 outer layers of thermoplastic resin contg. short glass fibers and a				

particulate **filler**, and a core layer of glass fiber mat, was prepd., preheated, and rapidly stamped on **metal** forming equipment at low temp. to give uniform moldings with good mech. properties and improved surface smoothness. Thus, sheets prepd. from mixts. of nylon 6 [25038-54-4] pellets 38.9, **kaolin** filler (av. particle size 10 .mu.) 38.9, and short glass fibers (length 1/8 in.) 22.2% were compression molded as the 2 outer layers of a 3-layer laminate in which a glass mat formed the core layer. The molding was carried out at 100 psi and 270.degree. and the composite sheet contained nylon 35.5, **kaolin** 35.5, short glass fiber 20.2, and glass mat reinforcement 8.8%. The laminate was preheated to 270.degree. and shaped in a deep drawing press at 140.degree. in 10 sec at 800 psi. After cooling, the surface roughness was .ltoreq.55 .mu.in.

- ST nylon reinforced deep drawing; glass fiber laminate drawing
- IT **Kaolin**, uses and miscellaneous
 RL: USES (Uses)
 (nylon reinforced by glass fibers and, cold drawing of laminates of)
- IT Glass fibers, uses and miscellaneous
 RL: USES (Uses)
 (plastics reinforced by, cold drawing of laminates of)
- IT Novaculite
 RL: USES (Uses)
 (poly(ethylene terephthalate) reinforced by glass fibers and, cold drawing of laminates of)
- IT Molding of plastics and rubbers
 (cold-drawing, of glass fiber-reinforced laminates)
- IT 9003-07-0 25038-54-4, uses and miscellaneous 25038-59-9, uses and miscellaneous
 RL: USES (Uses)
 (glass fiber-reinforced, cold drawing of laminates of)
- IT 14807-96-6, uses and miscellaneous
 RL: USES (Uses)
 (polypropylene reinforced by glass fibers and, cold drawing of laminates of)